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Full Throttle: Reforming Canada's Aviation Policy

Canadians are overpaying to travel by air because of government policy. Fuel taxes and sector-specific regulations increase the cost to travelers, and airport authorities are burdened by the terms of their operating leases with the federal government. Ottawa should enact reforms across the aviation supply chain to reduce the cost of flying for consumers.

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The Study In Brief

Federal government policies are a major cause of high costs throughout the aviation supply chain, often leading Canadians to waste time and money by seeking lower fares at nearby US airports, or not travel at all. High fuel taxes and onerous foreign ownership and airline-specific policies are harming the competitiveness of airlines. Meanwhile, airports have been transformed from the rundown state they were in when operated by the federal government to become world leaders in customer service and quality. However, Canada's airports are now handicapped by federal government policies that result in otherwise higher costs for travellers.

If Canadians are to have the most economically efficient aviation system possible – crucial for such a geographically vast country – the federal government should enact a comprehensive set of policy reforms across the aviation sector.

The federal and provincial governments should reduce, or eliminate, remaining aviation fuel taxes. The federal government should also gradually loosen foreign ownership restrictions on Canadian airlines, eliminate both company-specific burdens and protection for Air Canada, and attempt to renegotiate open skies agreements with the United States and the European Union to open the right to operate on domestic routes to all international airlines.

Twenty years ago, Canada was a global leader in moving airports from government to private operation. While the federal government still owns the major airports proper, it signed operating leases with not-for-profit airport authorities. These airport authorities make long-term commitments that the looming end of leases may soon jeopardize, necessitating Ottawa to take action soon. The federal government should sell its remaining interest in the leases at airports it owns either to the not-for-profit airport authorities that currently operate them or to for-profit corporations. Such sales could make investors, airlines, travelers, and taxpayers all better off.

Rather than regulating privately owned airports, government policy should focus on increasing competition in the sector. For example, if the City of Toronto approves the extension of the runway at the Billy Bishop Toronto City Island Airport and allows jets of all types that meet noise requirements to operate there, that would benefit travelers by enhancing competition locally and beyond.

Ottawa should treat airports and airlines like regular businesses, remove sector-specific taxes and ownership and operation regulations, and let our Canadian aviation companies compete on the world stage.

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As the second most geographically vast nation in the world and with a small, open economy, Canada is dependent on air transportation like almost no other country.

Yet Canada's air transportation system is heavily taxed (Cherniavsky and Dachis 2007) and uncompetitive compared with other modes of transportation and with air transportation systems in other countries. In a World Economic Forum report (Blanke and Chiesa 2013), Canada ranked behind only the Dominican Republic, Senegal, and the famously aviation-taxing United Kingdom[1] for the weight of its fees and airport charges on air transport.

The high cost of air travel is leading many Canadian travellers to fly instead through the United States – the Canadian Airports Council estimates that, in 2011, Canadians took 4.8 million trips through a US airport, as opposed to using a domestic airport (Canada 2013b). Many other Canadians choose to use other modes of travel or to not travel at all. These higher costs are passed on to Canadian businesses and consumers, potentially reduce tourism in favour of lower-cost destinations, and harm the Canadian economy. As trade increasingly takes the form of services that require people to travel (Schwanen 2014), Canadians may be losing international opportunities and choosing not to pursue domestic business that is too expensive to reach. More than a third of global international trade by value is carried by air, so the high cost of transporting it to Canada effectively acts as a punitive tariff that shuts Canadian businesses out of potential markets (Hummels and Schaur 2012). As well, the high cost of air travel in Canada also squanders the specific advantages afforded by the country's geographic location, as the most direct air routes between the Americas and many locations in Asia and Europe are over Canada.

The Need for Aviation Policy Reform

Transport Canada can best meet its mandate of creating a policy framework for an efficient transportation system by reducing barriers to competition, lowering taxes that do not meet user-fee principles, and levelling the playing field in the aviation sector.

The federal government should loosen the regulatory burden on Canadian airlines – particularly Air Canada, the largest domestic airline – which increases the cost of doing business. In addition to removing policy impediments that are specific to Air Canada, Ottawa should also end its actions that protect that company specifically, such as providing pension-funding relief and intervening in its labour negotiations. Ottawa should also eliminate aviation fuel taxes and encourage greater competition among airlines by eliminating foreign ownership restrictions.

Many thanks to the numerous reviewers of a previous draft of this paper, including Vijay Gill, David Gillen, Neil Raynor, Mike Tretheway, and other anonymous reviewers. I remain solely responsible for any remaining errors.

1 The UK Air Passenger Duty ranges from as low as £13 ($22, as of September 2013) on UK flights subject to the duty, to upwards of £188 ($310), depending on the distance and class of travel.

Further, since economic efficiency requires that the federal government pursue competitive neutrality, with no special taxes or other arrangements for particular sectors, it should remove the ground rent that airports pay and subject them instead to the corporate tax system that applies in the rest of the economy. I estimate that such a move, coupled with the sale of Ottawa's remaining leasing rights to and ownership of Canadian airports, could immediately increase federal government revenues by anywhere from $6 billion to $42 billion on a one-time basis. The auction of the federal government's airport assets could net even more if bidders were able to find new ways to increase the profitability of those assets.

Eliminating the federal lease of airports would especially benefit consumers. Because they are non-profit corporations, airport authorities have been using Airport Improvement Fees that passengers pay, rather than equity investment, to provide some pre-financing of largely debt-fuelled expansion. Long-term investors seeking an equity stake, such as pension funds, in airports might be better suited than passengers to financing future long-term capital expenditures. As well, local competition among privately owned airports – particularly if enforced by the Competition Bureau through Australian-style airport data disclosure, rather than heavy-handed fee regulation – could be an effective way to deliver lower costs, better services, or both, to consumers. Local governments – Toronto, for example – could also enhance competition by approving requests for airport development and expansion.

If Canadian governments were to take steps, such as reducing fuel taxes and other burdens on airports and airlines, to improve the cost competitiveness of the Canadian aviation supply chain, it would set the stage for Canada's airlines to compete in a globally competitive arena and situate Canada as the northern crossroads for aviation.

A Framework for Canada's Aviation Policy

The federal government, through Transport Canada, is the main actor in setting Canada's aviation policy. Thus, for Canada to have a globally competitive aviation sector that provides the most efficient service to Canadians and visitors, the federal government must take the lead on policy reforms. It could start by examining Transport Canada's mandate – as part of the review of the *Canada Transportation Act* due in 2015 – and how best to achieve it.

The main strategic goal of Transport Canada's national transportation policy is a declaration that "... a competitive, economic and efficient national transportation system that meets the highest practicable safety and security standards ... is essential to serve the needs of its users, advance the well-being of Canadians and enable competitiveness and economic growth in both urban and rural areas throughout Canada."[2] Such a lens of analysis is useful for policy areas such as travel visas, how the aviation sector enables trade, security, regional development, and much more. Previous studies have highlighted key recommendations in those areas, such as finalizing international Air Transport Agreements,[3] reducing the visa requirements for connecting international travellers, and simplifying and reducing the cost of tourist visas (Gill and Raynor 2013). In particular, as policy priorities, the federal government should

2 See the declaration in section five of the *Canada Transportation Act* (S.C. 1996, c. 10).

3 Air Transport Agreements, such as that which Canada has with the European Union, allow carriers based in either jurisdiction complete freedom to operate flights between jurisdictions, but do not allow foreign carriers to operate domestic routes; see Canada (2013c).

expand the Transit without Visa program to citizens of more countries and more airlines, and introduce an Electronic Travel Authorization (ETA) system, as Australia already has done, to replace its manual visa process.[4]

Despite the urgent need for such reforms, however, the focus of this *Commentary* is on whether the federal government's policies with respect to airlines and airports are encouraging economic efficiency and improving the ability of Canadian airports and airlines to compete internationally. To that end, I focus on ownership and operating costs, fuel costs, and airport charges, which account for 60 percent of the difference in costs for air passengers in Canada and the United States (Gill 2012).

The Nature of Competition in Aviation

Airlines are network economies, with hubs and spokes. Building a bigger hub can make the overall network more efficient, but creating only a single large hub could lead to less competition locally, so many countries have retained airports in public hands, although many are now also moving to privatize their airports (see Box 1).

Local Competition

There is considerable evidence that passengers pay a premium, relative to the cost of provision,[5] for direct flights out of a hub airport (Lederman 2008). Local monopoly power for airports comes from the barriers to starting new airports, such as the difficulty of receiving environmental and community approvals to operate and the benefit of greater connectivity at larger airports.

Airports compete locally in a number of areas. Cargo carriers, which provide approximately 15 percent of total airport revenues, are footloose between airports in a region (Trethewy 2001). As well, an airline or airport that pursues customers at the margin must offer the same price to all of its customers. Airlines and airports also compete with other modes of transportation, such as rail, bus, and automobiles. In addition, many Canadian airports face competition from subsidized nearby US airports.

Airports operate runways and other aviation infrastructure that have monopoly characteristics, as well as terminals with competitive retail opportunities. Although airports can raise their revenues by restricting supply and raising fees to access the monopoly infrastructure, they do so at the risk of reducing the number of passengers who pass through their terminals and thereby reducing their retail business (Starkie 2002).[6]

Network Competition

In addition to competing with nearby airports and other transportation options, many airports and airlines compete as part of broader hub-and-spoke networks. Competition also occurs among such networks, with the largest generally having the lowest costs, while, in small networks, individual hubs have relatively more monopoly

4 The Transit without Visa program is now open only to residents of Indonesia, Thailand, Taiwan, the Philippines, and select cities in China, and to certain airlines (Gill and Raynor 2013).

5 Larger airports are more complex and have higher average costs than smaller airports (Starkie 2002), but the hub premium effect extends beyond cost.

6 Canadian passengers are also drawn to US airports because of their lower taxes and fees than those applied to Canadian tickets. These charges are outside the scope of this *Commentary*, but for further details, see Cherniavsky and Dachis (2007) and Gill and Raynor (2013).

Box 1: International Models of Airport Ownership and Regulation

United States

Local municipalities or port or transportation authorities own almost all commercial US airports. US taxpayers fund approximately one-third of the Federal Aviation Administration's budget to finance civilian air traffic control, safety regulation, and airport grants. Municipally owned airports also may issue bonds that reduce the tax bill for the bondholder, thus lowering the cost of borrowing for public US airports relative to Canadian and private US airports.

Australia and New Zealand

In Australia before 1996, the Commonwealth government owned and operated nearly all airports. Beginning in the mid-1990s, all major airports were privatized, with long-term leases subject to price cap regulation administered by the Australian Competition and Consumer Commission. A 2002 inquiry into airport price regulation determined, however, that the market-power problem did not warrant strict price controls, and price cap regulation was replaced with price monitoring for all airports. The government will purchase the airports back from the private operators at the end of the leases.

In New Zealand, most airports are majority privately owned, with local governments retaining a minority stake. Uniquely, airport companies can convert the land and buildings they own to other uses and their fees and charges are unregulated (Tretheway 2001).

European Union

There is a wide range of airport ownership and regulatory models across Europe. Germany has partially privatized four of its approximately 20 international airports. All three airports in Paris and airports in Copenhagen, Zurich, and Vienna are jointly owned by government and private investors. Using panel data, Bilotkach et al. (2012) find that privately owned EU airports have lower aeronautical charges than publicly owned airports. However, using cross sectional data, Bel and Fageda (2010) find that unregulated private airports charge higher prices relative to regulated private airports or public airports. The United Kingdom was the first major country to privatize airports, with the goal of increasing airport efficiency and generating the maximum amount of government revenue in a sale (Tretheway 2001). It has fully privatized almost all major airports and implemented price cap regulation on the London-area airports, but has imposed no regulation on other UK airports.

power. Approximately 50 percent of passengers on major airlines (those that carry at least 100,000 passengers per year) who flew from Canada to the United States in 2010 made a connection through a hub airport, according to Statistics Canada's Air Passenger Origin and Destination Survey. In 1999, the last year in which Statistics Canada released domestic connection data, 25.6 percent of passengers made a connection on a domestic flight.

Creating a larger network of flights between hub and non-hub airports creates benefits for travellers in hub and non-hub airports alike. A hub and spoke network can sustain individual routes that would be uneconomical in a point-to-point fashion (Aguirregabiria and Ho 2012). The beneficial effect of one route on another within a network is known as a positive network externality.

Competition among hub-and-spoke networks can benefit passengers located in cities that are spokes in terms of fares that are lower than those in a point-to-point system. As well, travellers in a city that is a hub or that is connected to two or more hubs are able to take advantage of competing networks. Networks compete with each other for passengers travelling on a spoke to another point on the network on the basis of the cost of the flights needed to transport passengers to their destination (see Heathrow 2012).

Policy-Induced Airline Policy Pressures and Solutions

As the largest component of the aviation supply chain, airlines are a natural starting point for examining policy-induced cost pressures on the Canadian aviation sector – specifically pressures relating to fuel taxes, ownership restrictions, and regulations with particular regard to Air Canada. Governments should view individual aviation-specific policies through user-fee principles and competitive neutrality. That is, a sector should be taxed (beyond generally applicable taxes) only to the extent that government provides services or infrastructure to the sector. Regulations should be based on economic arguments, such as externalities, and not counteract the positive network economies that could emerge if the Canadian airline market were more globally integrated.

Fuel Taxes

The federal government and most provinces levy taxes on aviation fuel, the largest single cost input for airlines, used on domestic flights, although – with the notable exception of Ontario – on international flights.[7] The federal aviation fuel tax was introduced in the 1970s to finance aviation infrastructure and Air Canada, and is now 4 cents per litre. Provincial rates range from a high of 3.2 cents per litre in Manitoba to a low of 0.7 cents in Newfoundland and Labrador and Prince Edward Island (Lazar 2013). Because governments generally do not return the aviation fuel tax to aviation infrastructure or services, it is not a user fee but an extra cost of doing business that likely is passed on to consumers. Fuel taxes also lead to airlines trying to arbitrage between provinces or internationally, a practice known in the industry as "tankerage." An airline can lower its after-tax fuel costs by loading extra fuel in the low-tax jurisdiction, but at the cost of carrying extra weight in-flight and therefore burning more fuel. Airlines engage in this practice if the cost of burning more fuel is less than the additional cost of taxes upon refuelling, but the

7 For a summary of the complex issues surrounding the taxation of fuel for international flights, particularly for addressing environmental harm of emissions, see Keen and Strand (2010). British Columbia ceased levying its fuel tax on international flights in 2012. An aviation fuel tax linked to the environmental damage of emissions would be akin to a user fee, but that should only occur as part of economy-wide emissions pricing, an issue that is outside the scope of this *Commentary*.

economic cost of the distortion in terms of wasted fuel and environmental harm can be substantial.

The federal government should consider removing its aviation fuel tax entirely. The fuel tax revenues Ottawa collects are not linked to any services it provides or to aviation infrastructure it finances.[8] Provincial governments should also reduce their aviation fuel taxes so that the amount of tax they collect is no more than what they finance for aviation infrastructure. Given current levels of provincial investment in aviation infrastructure, this recommendation means that provinces should largely eliminate their aviation fuel taxes.

Ownership-based Restrictions

For an airline to operate a domestic route in Canada, no more than 25 percent of its voting shares may be foreign-owned. Such a restriction, however, increases the cost of borrowing and limits the size of the available capital pool to finance the purchase or leasing of aircraft, which is one of the largest expenses airlines incur. The restriction can also result in airlines' being underfinanced and otherwise more vulnerable to cyclical downturns or force them to arrange their voting and financing control rights in ways that raise the cost of finance, as Air Canada discovered when it emerged from bankruptcy (McFetridge 2008). As a solution, the federal government should eliminate restrictions on the foreign ownership of airlines that operate within Canada. Rather than relying on sector-specific ownership rules, Ottawa instead should rely on the *Investment Canada Act*, which applies to all industries, to block major foreign purchases if it desires. An interim step of raising the foreign ownership limit to 49 percent, as is common for airlines in much of the rest of the world (McFetridge 2008), would be an ideal way to phase in such a reform.

The "Open Skies" agreement between Canada and the United States allows Canadian and US airlines complete freedom to operate flights between the two countries (Canada also has a similar agreement with the European Union). The agreement, however, does not allow passengers to travel between two points within one country on aircraft owned by airlines based in the other country. It thus isolates Canadian aviation networks from those in the United States, so that passengers flying through Canadian airports do not get the full benefit of competing networks. If Canada and the United States were to have a truly "open skies" agreement that allowed airlines domiciled in one country to fly between two destinations in the other country, Canada's aviation network would become integrated with the larger US network, permitting it to compete to attract connecting passengers and providing Canadian passengers with more options to connect through the United States.

Special Provisions for Air Canada

Under the *Air Canada Public Participation Act*, which privatized Air Canada in 1988, the airline is required to maintain operational and overhaul centres in Winnipeg, Montreal, and Mississauga, to keep its head office in Montreal, and to offer all customer services in both English and French.[9] The Act's bilingualism requirements, however,

8 Although the federal government no longer directly reports the total revenue it (or any province) collects from aviation fuel taxes, Cherniavsky and Dachis (2007) estimate that federal aviation fuel tax revenues far exceed federal Airport Capital Assistance Program subsidies, the only major federal subsidy program for aviation infrastructure.

9 In February 2013, Air Canada lost a lawsuit brought against it by the Quebec government, which argued that the airline was violating the Act by not having located its heavy aircraft maintenance in Montreal. The judge in the case ruled that, "[i]f Air Canada wants to modify its business plan so significantly, it must be supported by a legislative change" (Marowits 2013). Air Canada is appealing the ruling.

are unnecessary in many parts of the country and lead to higher labour costs for the airline if it has to fly bilingual staff around the country to ensure such services are always available even if unilingual services will suffice. Indeed, the bilingualism requirement is stricter than those for federal services under Ottawa's *Official Languages Act*, which requires bilingual services to be provided only in areas "where numbers warrant."[10] Such location and bilingualism requirements create an uneven playing field for Air Canada with respect to its competitors.

At the same time, Air Canada has benefitted from a number of government interventions. For example, although it faces a substantial pension solvency deficit, the airline received an extension from the federal government in March 2013 to defer its payments to fill the deficit over seven years through to 2021 (Canada 2013a).[11] Ottawa also intervened to end a labour disruption at the airline in 2012, which, by insulating it from an immediate strike, forbidding labour disruptions over the course of the arbitrated settlement, and setting the terms of the back-to-work legislation that potentially favoured Air Canada, worked to the disadvantage of Air Canada's competitors.[12]

The federal government should repeal the *Air Canada Public Participation Act*, although it could still require that both Air Canada and Canada's Airport Authorities be subject to the *Official Languages Act*, and require them to provide bilingual services in places where numbers warrant. Ottawa should also foreswear any further special assistance to Air Canada, such as special pension provisions or involvement in labour negotiations.

Elements of Canada's Airport Policy

The other major component of the aviation supply chain is airports. Canada has some of the world's most internationally recognized airports for customer service (see Canadian Airports Council 2012). They have come under criticism, however, for having high costs. The rent payments that Airport Authorities must make to Ottawa to operate federally owned airports are passed on to passengers. Further, the way the federal government has designed the rent system has resulted in an inefficient allocation of resources, and discourages Airport Authorities from pursuing worthwhile business opportunities that could reduce costs for Canadian travellers.

Transfer from Federal Government to Airport Authorities

Until 1992, Transport Canada owned and operated all airports in Canada with regularly scheduled passenger flights. Canada was the second major developed country, following the United Kingdom, to move airports from exclusive government ownership and operation toward more private involvement. With few models to emulate, the federal government designed a corporatization model in which it retained ownership of the airports, but leased airport land and assets to non-profit, non-share-capital Airport Authorities. No other country has emulated this model of non-profit airport ownership along with no formal regulation.

In 1992, the federal government transferred the operation of five airports to four Local

10 Airports that serve more than one million passengers are also subject to a similarly onerous restriction in the *Official Languages Act*, regardless of the need for bilingual services.

11 The deferment extended 2009 legislation that extended Air Canada's solvency payments due in 2009 through 2013.

12 In the decision between Air Canada and the pilots' union, the arbitrator expressly stated that the legislation directed him to base a decision on "(a) the short- and long-term economic viability and competitiveness of the employer; and (b) the sustainability of the employer's pension plan" (see Stanley 2012).

Airport Authorities (LAAs): Vancouver, Calgary, Edmonton, and Montreal (Dorval, now Pierre Elliot Trudeau, and Mirabel) under a single airport authority, with Transport Canada retaining ownership of the land.[13] The intent of the transfers was to place the airports in the hands of organizations that would be able to invest in them, while, through a long-term rent payment, also making the federal government no worse off financially. In 1994, Ottawa created a National Airport Policy, which is still in place, and designated nationally significant airports as part of the National Airport System (NAS).

Beginning in 1994 and running through 2003, the federal government transferred the operation, but not the ownership, of airports in the national and all provincial, and territorial capitals, as well as airports with annual traffic of 200,000 passengers or more at the time, to non-profit, non-share-capital Canadian Airport Authorities (CAAs) on terms similar to those of the transfer to the original LAAs.[14] There is now a single Airport Authority in each major Canadian city. For example, Aéroports de Montréal operates both Mirabel and Pierre Elliot Trudeau airports, and the Greater Toronto Airport Authority (GTAA) operates Lester B. Pearson Airport.[15] The Toronto island airport, however, is operated not by the GTAA but by the Toronto Port Authority. With a few minor exceptions, the federal government also transferred ownership and operation of its remaining regional, local, and small airports to local municipalities, and now has no role in the ownership or operation of these airports. As well, the federal government operates an Airport Capital Assistance Program, started in 1995, to provide funds for safety improvements at small and regional airports.[16] Many of these municipalities have contracted their operations to private companies.

In 2012, approximately 105 million passengers, representing 95 percent of all air passengers in Canada, used NAS airports. Around 88 percent of air cargo tonnage loaded in Canada also goes through NAS airports.

Ground Leases

In compensation for bequeathing capital assets to Airport Authorities, the federal government introduced ground leases, for which the Airport Authorities pay a rent. The operating leases are for 60-year terms, with an option to extend them for an additional 20-year period. All Airport Authority assets revert to the federal government at the end of the lease. Airport Authorities that are part of the NAS are required to pay rent, but municipally owned airports are not.

When the ground leases were introduced, numerous Airport Authorities argued that the rent formula was too complex, the determination of amounts due unclear, and the resulting payments

13 The Calgary Airport Authority operates Springbank Airport, and, until it was decommissioned in December 1, 2013, Edmonton City Centre Airport was operated by the Edmonton Regional Airport Authority.

14 Except where otherwise noted, I refer to both LAAs and CAAs as Airport Authorities in the rest of this *Commentary*. The City of Kelowna took possession of its airport and the territorial governments took possession of airports in their territories. For the full list of NAS facilities, see Canada (2011).

15 The federal government purchased 18,600 acres of land in Pickering in 1972 and still owns this land. For details, see Canada (2013d). The federal government has not stated that the GTAA will operate the Pickering site, but retained the GTAA to conduct a needs assessment study of the airport (see GTAA 2010). In 2006, Ottawa sold land that a potential expansion of Mirabel Airport would have occupied back to the farmers from whom it had originally expropriated the area.

16 As of August 2013, the federal government had provided a total of $606 million for 751 projects at 174 airports (Canada 2013e). However, these funds generally have not benefited rent-paying NAS airports.

too high (Canada 1999). Accordingly, in 2005, the federal government announced a new rent formula calculated using gross revenue, graduated by the level of revenue. Most of the major Airport Authorities now pay Ottawa an incremental rate of 8, 10, or 12 percent of total revenue, with the Greater Toronto, Vancouver, Montreal, and Calgary Airport Authorities in the 12 percent bracket.[17] The net book value – the original purchase cost minus the accumulated depreciation – of airport assets, including the value of airport lands, at the time of transfer was $2.9 billion (in 2012 dollars); see Table 1. Since their respective transfer dates, the major Airport Authorities have paid $5.0 billion (in 2012 dollars) in rent.

One of the original justifications for ground leases – that the federal government should collect the revenue it otherwise would have earned had it retained the assets – does not justify continuing the leases, however, given that airport capital stocks are now substantially different than the original assets. An economically correct ground rent rate would take account of the cost of maintaining facilities and the opportunity cost of the investment in infrastructure assets (Canada Transportation Act Review Panel 2001). The only remaining asset of potential value is the land that airports occupy – which Gill (2004) estimated to be worth $896 million in 2000, based on the market value of nearby land. This airport land has no opportunity cost because the leases forbid Airport Authorities from using the land for purposes other than operating an airport.

Operational Incentives in Ground Rent

Determining the rent due as a share of total revenues – as opposed to profits, the tax base of the corporate income tax – is problematic because airports must mark up the price of every service they provide by at least the amount of ground rent due on that incremental revenue. The additional rent due, in turn, requires that airports collect additional revenue.[18] The rent formula requires that new revenue sources meet a higher hurdle rate of return than under the corporate income tax. The formula discourages airports from pursuing new revenues that could reduce the amount they need to collect through passenger charges. The formula thus means that airports do not have an incentive to pursue low-margin, although still profitable, ventures, resulting in an economic loss.

Canadian airports earn relatively less revenue from ancillary revenue sources – revenues not directly charged to each passenger or airline for each boarding or landing – than do privatized airports around the world. For example, the major Canadian airports collected between $7 and $10 in

17 The brackets are: no lease due on the first $5 million of revenue; 1 percent on the next $5 million; 5 percent on the next $15 million; 8 percent on the next $75 million; 10 percent on the next $150 million; and 12 percent on any amount over $250 million. This lease formula was phased in gradually in the three years prior to 2010.

18 Cherniavsky and Dachis (2007) use the following example;

> Suppose that the operating cost of maintaining parking facilities at an airport is $250 a day: the airport must charge parking fees that will generate daily revenues of at least that much in order to break even. However, if the airport must pay 10 percent of all its revenues in rent, then the airport's rent will equal $25 a day, which effectively raises the operation's costs and, in turn, increases its break-even point by $25 to $275 a day of revenue. If the airport generated $275 a day from parking services, its rent would increase to $27.50 and, again, its operating costs and break-even point would rise.
>
> The mark-up formula that the gross profit margin of a project must exceed is $x' = x/(1-x)$, where x is the rent rate on revenues and x' is the effective rate on operating costs. A 12 percent statutory rate tax on revenue becomes a 13.6 percent tax on revenue to cover operating costs, and a 10 percent rate becomes 11.1 percent. This can be reflected in higher costs for customers, assuming the costs get passed on, a reduced ability of airports to collect revenue from customers, or a mix of both.

Table 1: Asset Value at Date of Transfer, Cumulative Rent Paid, and Total Passengers at Major NAS Airports

Airport Authority *(by amount of ground rent paid)*	Date of Transfer to Airport Authority	Asset Net Book Value at Date of Transfer *(2012 $ millions, unless otherwise noted)*	Cumulative Rent Paid since Transfer (through 2012)	Total, Passengers 2012 *(millions)*
Toronto	December 2, 1996	630	2,411	34.1
Vancouver	July 1, 1992	259	1,356	17.1
Calgary	July 1, 1992	266	490	12.8
Montreal (Mirabel and Trudeau)	August 1, 1992	378	335	13.3
Ottawa	February 1, 1997	175	155	4.5
Edmonton	August 1, 1992	88	139	6.7
Winnipeg	January 1, 1997	72	65	3.4
Halifax	February 1, 2000	108	46	3.5
Other NAS airports	1997–2003	879	36*	9.0
Total		**2,854**	**5,033**	**104.9**

Notes: Net book value is the original purchase price minus accumulated depreciation. Asset book value does not include chattels that the federal government sold to Airport Authorities. Passenger numbers at some other NAS airports are not available. Other NAS airports in this estimate are Victoria, St. John's, Quebec City, Saskatoon, Regina, Thunder Bay, Gander, Charlottetown, Saint John, Fredericton, Moncton, London, and Prince George. Many of these airports paid no ground rent as of 2012 and did not report passenger numbers. The GTAA purchased terminal three at Pearson Airport for approximately $700 million, as it was constructed privately and not owned by the federal government; I therefore do not include it in the value of transferred assets.

* Cumulative rent paid in nominal dollars.

Sources: Author's calculations from Transport Canada, airports' financial reports, and Statistics Canada CANSIM database, table 176-0003.

non-aeronautical revenues per passenger in 2012 compared with the equivalent of $15 in Sydney, Australia, and Zurich, Switzerland, and more than $20 in two major London airports (Figure 1). Non-aeronautical revenues make up 31 percent of revenues in total for the eight major NAS airports in Canada. In contrast, Heathrow SP (formerly known as British Airports Authority), which, in 2012, operated Stansted and Heathrow airports, generated 43 percent of revenues from non-aeronautical sources, while Sydney International Airport generates 46 percent of revenues from such sources. Not only do major international hubs earn more non-aeronautical revenues per passenger than Canadian airports; smaller, privatized airports in Australia, such as Adelaide (with passenger

numbers comparable to those of Edmonton), Perth (comparable to Calgary), and Brisbane and Melbourne (with passenger numbers between those of Toronto and Vancouver), all earn more non-aeronautical revenues per passenger than any major Canadian airport.

Governance of Not-for-Profit Airports

Under public or non-profit ownership, ultimate responsibility and accountability are often unclear. The governance of the Airport Authorities is similar to that of NAV CANADA, the air navigation system operator, and Canada Port Authorities. NAV CANADA is a stakeholder cooperative in which users, represented in large numbers on its board of directors, seek low costs and high-quality service (Poole and Butler 2002). Its governance system works because all aviation users, both incumbents and new entrants, must use NAV CANADA's services and face the same price and quality of service. With respect to the Airport Authorities, however, the Canada Transportation Act Review Panel (2001) has "identified deficiencies in governance and control." Their governance framework includes representatives of airlines, local business communities, and local governments, as well as the disclosure of financial documents and the consultation of users on fee setting. With a diverse set of users – such as local governments and business communities, airlines, on-site retailers, and passengers – with less obvious common purpose, it is unclear to whom the government-appointed boards of directors of Airport Authorities are accountable. Instead, corporate accountability is best served when shareholders who directly bear the financial consequences of corporate decisions have the power to elect the board of directors.

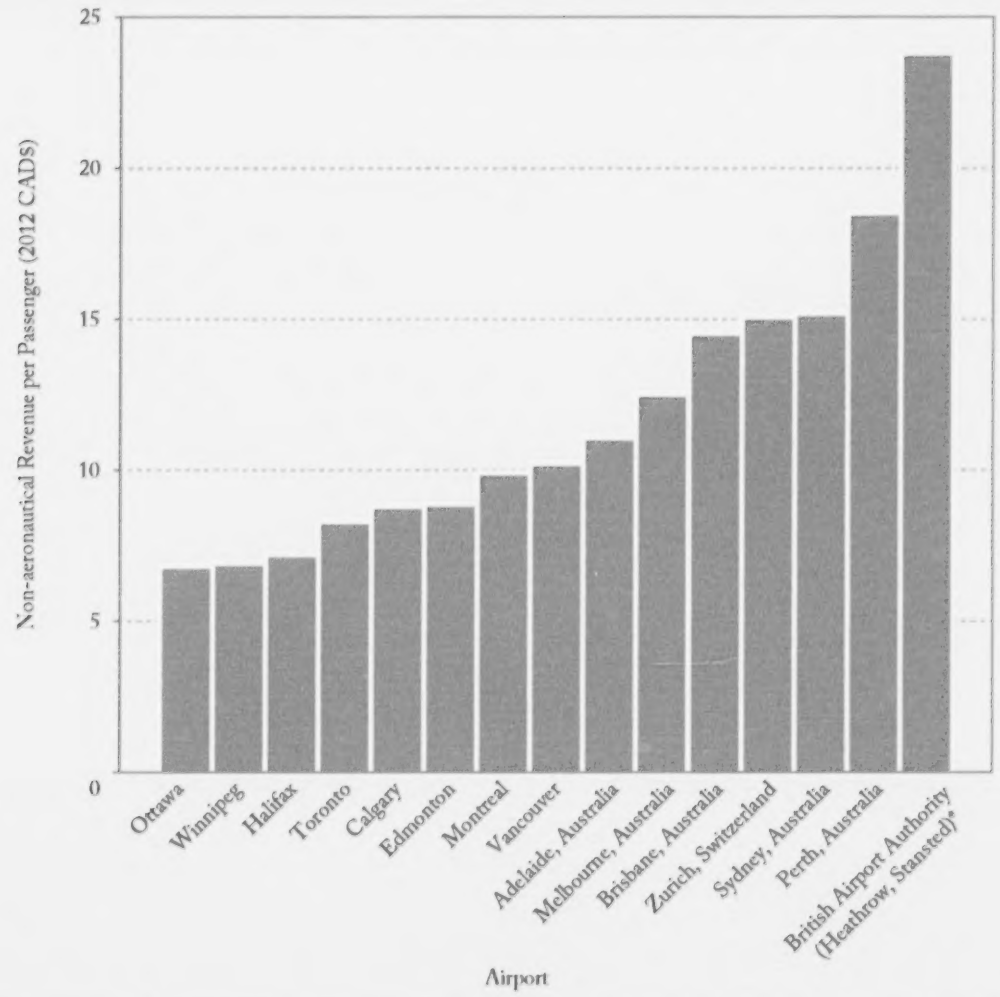
Airports' Access to Capital

Although ground rent is a significant cost for Canadian airports, it is now a relatively small share of total airport costs compared with amortization and interest costs. From $308 million in 2001, less than 30 percent of total major Airport Authority costs that year, capital costs increased by 2012 to $1.3 billion, or more than 50 percent of total costs (Figure 2). Over the same period, ground rent payments of major airports increased from $248 million to $276 million, but the proportion of such payments in total costs fell from about 20 percent to 10 percent. With amortization and interest costs taking up such a large share of total Airport Authority expenses, it is becoming increasingly important that policymakers ensure that the policy environment for capital expenditures and capital allocation is as economically efficient as possible.

The choice many airports made to pre-fund capital investments through Airport Improvement Fees stems from their limited access to capital as non-share, non-profit corporations. Canadian airports are able to access debt finance but not equity markets, and the rent formula provides no adjustment for interest deductibility or asset depreciation.[19] Like a household seeking a mortgage and needing a down payment, it is difficult for airports to use debt financing for the full cost of capital infrastructure (Tretheway and Markhvida 2013). The result is that, although current travellers are now paying fees to finance

19 Equity finance is usually more expensive for the issuer – that is, it requires a higher rate of return – than debt finance. This is true for a firm that already has an equity base and is looking to issue new capital, in which both its average and marginal cost of equity capital will be higher than the cost of issuing debt. As with any upward sloping supply curve, however, the cost of the initial supply of equity capital likely will be lower than the average cost.

Figure 1: Non-Aeronautical Revenue per Passenger, 2012

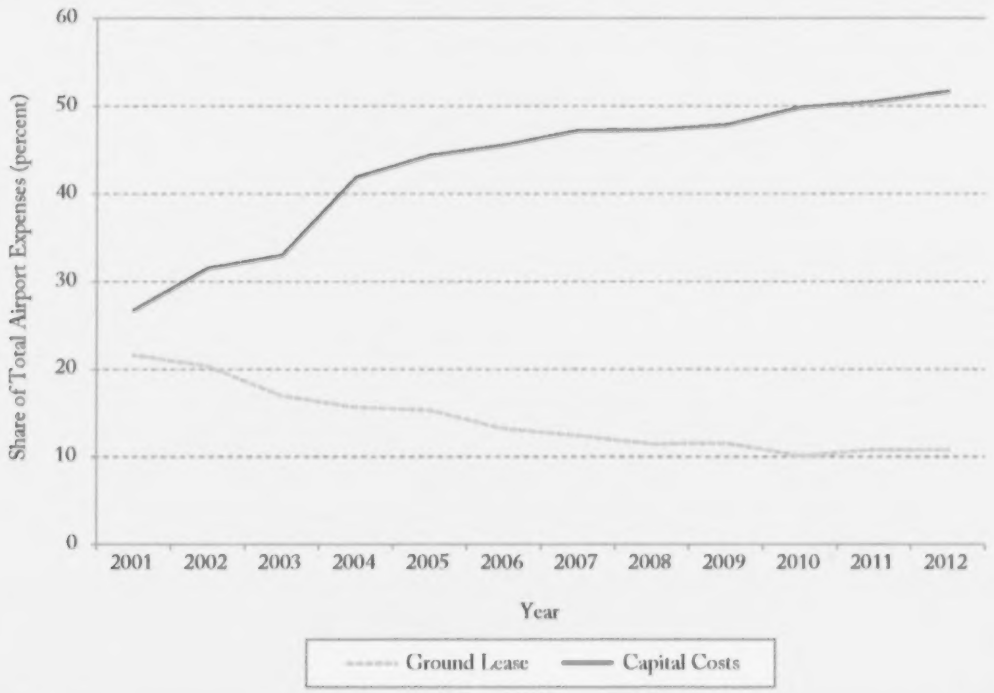


* Heathrow Airport Holdings as of 2013.

Sources: Author's calculations from airports' financial reports; Bank of Canada.

amortization and interest expenses, previous travellers paid fees that became retained earnings that financed a share of the capital investments from which both current and future travellers will benefit (Tretheway 2001). Although most Canadian airports have undergone a substantial increase in investment in recent years and past travellers cannot be compensated for lessening the immediate need for investment finance, these investments one day will need to be replaced or repaired, requiring new sources of finance.

Figure 2: Ground Lease and Capital Expenses as Share of Total Airport Expenses – Total of Eight Largest Airport Authorities



Note: Capital costs include amortization expenses and interest payments.

Source: Author's calculations from airport authorities' financial reports.

Canada's airports – both NAS airports and municipally owned airports – pay no federal or provincial income tax, [20] This has the consequence of increasing the cost of debt borrowing relative to that for regular corporations since Airport Authorities cannot deduct interest expenses from the rent payments as they would if they paid corporate income tax. Similarly, airports must pay rent on the Airport Improvement Fees passengers pay, which increases the cost of this source of capital.[21]

End-of-Lease Issues

At present, there are no clear arrangements for how to address the transfer of airport assets, obligations,

20 NAS airports make payments to municipal governments in lieu of property taxes. As municipal departments, municipally owned airports are not subject to income tax under the *Income Tax Act*, R.S.C. 1985 c.1. (5th Supp.), s. 149.

21 Airport Improvement Fees are otherwise potentially a lower-cost form of capital finance, because passengers who pay the fees do not demand a dividend or claim on future profits, as equity investors would.

and contracts back to the federal government when leases end. Although these are not due to end before 2052 at the earliest, the lack of such arrangements is already having a chilling effect on long-term contracts, the life of which can be up to 40 or 50 years, and long-term (30 years and more) bond issuances. Airports might need to amortize assets over a shorter time period than their actual economic life, which could result in an increase in fees and charges (Tretheway 2013). Absent a solution, the potential problems with end-of-lease issues will accelerate as transfer dates move closer.

Recommendations on Airport Policy

The quality of the infrastructure of Canada's airports has improved since the federal government transferred them to local Airport Authorities, since the move increased capital investment in airports. Ottawa should now complete its extrication from airports and either auction its lease interests and ownership to private companies or transfer ownership to Airport Authorities at a nominal cost of $1 or at the net present value of future rents and cancel leases and remaining ground rents (see Canada 2012, 2013b).

Auctioning to private companies would create a level playing field in capital markets for airports and the rest of the economy, potentially reduce the cost of air travel for travellers, and result in a large upfront cash infusion to the federal government.[22] Transferring assets to Airport Authorities at only a nominal dollar amount would reflect the true economic cost of land.[23] Such a transfer of the assets would be relatively simple, but would result in reduced revenue for the federal government (harming taxpayers), and entrench many existing problems that the non-profit, non-share corporation model creates. It would also make it more difficult to create for-profit corporations in future because determining the beneficiaries of a sale would become difficult (currently, Canadian taxpayers are, in effect, the owners of NAS airports). Ottawa could also negotiate a transfer price with the Airport Authorities, but it would be difficult to ascertain a true market value without creating a market, such as an auction, for the airports.

Addressing Impediments to Selling Airports

How could the federal government place Airport Authorities on the same corporate basis as the rest of the economy and collect future rent payments without violating the existing lease terms? Rather than pass legislation to modify contract terms,[24] Ottawa could sell its interest in the leases and future ownership, then grant Airport Authorities

22 Auctions could take many forms, with various limits on share ownership, such as by other Airport Authorities, as needed. The Canada Transportation Act Review Panel argued that "[r]estrictions on share ownership, if any, would need to be established. In the case of the largest entities, several offerings would probably be needed, with the initial sale serving both to test the market and to help the government determine a fair market value" (2001, 161).

23 In Australia, the Commonwealth government leases airports to private corporations and has dealt with the end-of-lease issue by including in contracts a term that states that the government will buy back the assets from the private company at the end of the lease. That approach would not work in Canada, however, because once the federal government received the assets back from what would be a defunct Airport Authority there would be no final owner (people, corporations or governments) of the Airport Authority to give the money.

24 The terms of the leases, however, do not impede the federal government's ability to enact legislation relating to any matters affecting either the leases themselves or the airports to which they apply. For example, see Section 40.01 of the GTAA ground lease.

the first right of refusal to match the terms of the best purchase offer.[25] Indeed, airport leases envision such a sale, and would allow Airport Authorities to compete with other bidders for the right to take ownership of the airport lands on which they operate.

The new owners would earn ground lease revenues until the leases expire, and would take ownership of the airport lands thereafter. They would then be able to negotiate with their tenants – the Airport Authorities – to modify the terms of the leases in a way that would be beneficial to both sides. The new owners could also replace leases with a more efficient approach to capital allocation, profit collection from the airport, and other terms. A transfer along these lines would address issues related to placing airport ownership in private hands as well as end-of-lease issues, provide the federal government with an immediate revenue source in a contested auction, and allow private parties to negotiate on a case-by-case basis the best approach at individual airports.

The Benefits of Auctions

The main beneficiary of Ottawa's auctioning off its remaining lease interests in major airports and receiving an upfront cash payment now would be the Canadian taxpayer. The first step in making the decision to do so would involve calculating the net present value of future rent payments. The amount of annual revenue each Airport Authority collects determines the rent it pays the federal government. Thus, as Gill and Raynor (2013) argue, any estimate of the potential buyout would have to be airport specific. I provide two estimates: one in which the future revenues of each airport grow in line with the airport's historic ten-year annual average rate, and another based on the average since 2009. The net present value of the future stream of rents also depends on the discount rate Ottawa applies to future revenues. A low rate, equivalent to the federal government's most recent long-term real return bond rate – which averaged 1.1 percent between June and October 2013 – would suggest that it places a high current value on future payments. A higher discount rate, such as a 7 percent real rate – which Gill and Raynor argue is the Treasury Board's standard discount rate – would mean that the government places a relatively low value on future payments.

Assuming that airport rent were to increase in line with average revenue growth over the 2002–12 period and at a low discount rate, the federal government would be indifferent between an upfront payment for the eight major airports equal to the net present value of future rent payments of $42.1 billion or continuing with leases (see Table 2); a higher discount rate would result in a total value of $10.3 billion for the eight largest airports. On the other hand, if revenues were to grow at the rate of the 2009–2012 period – which is higher than the ten-year average for some airports and lower for others – and at a low discount rate, then the government would be indifferent between keeping the leases or receiving $22.2 billion in total for the eight airports. A higher discount rate would result in a net present value of the leases of $6.3 billion.

If the auction of an individual airport resulted in a purchase price above the net present value of future rent payments, the federal government would be better off collecting anticipated future revenues now. Private bidders might be willing to pay more if they believed they could better exploit additional revenue opportunities than could the existing Airport Authorities. Equity partners would be able to provide the financing of retained earnings for airport investments that passengers are currently

25 Under article 55 of the GTAA lease, for example, this first right of refusal is mandatory.

Table 2: Net Present Value of Future Rent Payments, Major NAS Airports

	If Future Revenues Increase at Same Annual Rate as 2002–12		If Future Revenues Increase at Same Annual Rate as 2009–12	
	Real Discount Rate			
	Low (1.1%)	High (7.0%)	Low (1.1%)	High (7.0%)
	(2012 $ millions)			
Toronto	17,180	4,300	3,468	1,491
Vancouver	2,067	738	1,865	687
Calgary	8,974	2,004	3,854	1,024
Montreal (Mirabel and Trudeau)	7,672	1,808	6,048	1,521
Ottawa	860	228	1,255	300
Edmonton	3,647	777	4,493	914
Winnipeg	856	212	221	85
Halifax	837	219	990	251
Total	**42,092**	**10,286**	**22,195**	**6,272**

Notes: Assumes that nominal airport rent revenues from 2012 grow at the same rate as revenue for the remaining years in each airport's 60-year lease and future inflation is 2 percent. I do not take account of future rents at smaller airports increasing when future revenues are subject to higher rent rates at higher income thresholds than currently, or rents beyond the end of the 60-year lease.

Source: Author's calculations from airports' financial reports and Statistics Canada CANSIM database, table 176-0043.

paying, albeit without the expectation of a dividend, through Airport Improvement Fees. Rather than levying capital financing costs for long-lived assets on the current generation of travellers, equity owners would be able to match their investment horizons with the lifetime of the investments. At the same time, the federal government and the provinces would be able to collect corporate income taxes from privatized airports, so that the additional revenue could make a sale for less than the net present value of future rent payments still worthwhile.[26]

Would a transfer, rather than a sale, of ownership result in lower cost to consumers? Not necessarily, because once an asset was transferred, the airport operator would act to maximize profit. Any purchase costs would be sunk and not relevant to the new operator's ongoing operating decisions.

26 The sales would be largely neutral to municipal governments as they are currently collect payments in lieu of taxes from Airport Authorities.

Before making any final decision, however, the federal government should conduct a thorough analysis of the relative costs to consumers and to itself, taking into account factors such as the likely cost of equity for a new for-profit airport, the rate of interest a for-profit airport would pay on its debt, and potential compensation and transactions costs due upon transfer.

One way to move incrementally toward a for-profit model would be to adopt a pilot program akin to the US program that has privatized the international airport in San Juan, Puerto Rico. The federal government could, for example, sell its lease interests in the smallest NAS airports now, as it currently collects little rent from them; these airports then could form the model for later, higher stakes auctions of the larger airport leases.

Ensuring Efficient Airport Operation after Sale: Regulation or Competition?

Since there is a chance that the winning auction bidder could act like a monopolist, however, many countries that have privatized their airports have placed them under a form of price regulation, with mixed success (see Box 2). The international evidence of airport privatization is beginning to show that light-handed regulation – such as Australian-style price monitoring, in which airports are only subject to regulation upon well-founded evidence of abuse of dominance – results in the lowest costs for aviation users.

Canadian travellers would benefit most from a reformed aviation system through competition. Simply replacing a single, regional, non-profit Airport Authority with a monopoly, for-profit airport operator would likely leave consumers no better off. Such competition could result from separating the ownership and operation of secondary airports in a region. For example, the federal government should consider splitting the eventual ownership – pending any advice from the Competition Bureau – of Mirabel and Pierre Elliot Trudeau airports in Montreal, Lester B. Pearson Airport and the potential Pickering airport in Toronto,[27] and smaller commuter airports. Such a split would be similar to what occurred in the United Kingdom when the British Airports Authority was required to divest Stansted and Gatwick airports from the Heathrow holding.

Splitting the ownership and operation of airports among more than one operator would reduce the otherwise excess profits of a monopoly owner. Reduced future profits would result in potential buyers of airports having a lower willingness to pay for the ownership rights of airport leases, thus reducing potential government sale revenues.

Billy Bishop Toronto City Island Airport offers an interesting example of how competition would work. Allowing for the expansion of the airport's runway – financed by users of the airport – would encourage more competition not only between the Island Airport and Lester B. Pearson International, but also in Canada and the United States more generally by expanding the two countries' air network. The allocation of airport slots at the Island Airport should also be investigated, along with whether an exemption for a specific class of airplane, rather than any jet that meets noise criteria, would increase competition.

The recent success of the Island Airport, along with the potential benefits of an expansion to allow jets means that the Toronto Port Authority, the City of Toronto and Transport Canada should work together in the coming months and years to address the remaining issues pointed out by the City of

27 A buyer of the Pickering lands, for example, should also be free to transform it into other uses, subject to the normal approvals and zoning process in the local municipality.

Box 2: Airport Regulation in Practice

Other countries have applied a number of regulatory models to airport price setting, each with potential problems. The most common models are rate-of-return regulation, price-cap regulation, and price monitoring.

Rate-of-Return Regulation

In this model, the airport is allowed to set prices so long as the overall shareholder return does not exceed a given rate. Regulators usually have a severe information disadvantage relative to the airports that could lead to distortion and the chilling of airport investment decisions. This often results in firms seeking over expansive capital facilities, and the regulatory process that is often time consuming and expensive.

Price-Cap Regulation

Under this model, regulators set a maximum annual price increase, taking into account factors such as expected inflation and productivity gains. Regulators can either regulate all airport revenues (known as a single till) or only aviation-related revenues (a dual till). Price-cap regulation makes it difficult for airports to ration scarce landing slots, and makes it difficult to change to meet market demand, which is notoriously variable in the aviation sector. The price cap on London airports has led to severe congestion. Further, under a dual till, it is difficult for regulators to determine in a comparable manner across multiple airports whether certain types of revenues – such as the sale of aviation fuel, de-icing services, real estate rented by airlines, and other sales to airlines – are aviation or non-aviation revenues (Zenglein and Müller 2007). Bilotkach et al. (2012) find that single till regulation lowers aeronautical charges relative to dual till regulation in EU airports.

Price Monitoring

In this model, airports are free to set prices as they like, but must provide financial information to a regulator, which can impose regulation if it finds that the airport is abusing its market power or in response to a justified complaint from an airport user. Sydney Airport in Australia was privatized in 2002, subject only to price monitoring, and price regulation at all other private Australian airports was replaced with price monitoring in July 2002, with regular five-year reviews of the price-monitoring system to determine if price regulation should return. The Australian Competition and Consumer Commission annually reports on prices, costs, and profits at five major airports. Despite some concerns from airlines that price monitoring does not provide a strong incentive for airports to invest in infrastructure or set reasonable prices, a recent review of the Australian price-monitoring regime found little reason to change regulatory models (Australia 2011). One potential problem of price monitoring is that airports that know they will come under price regulation might increase their prices temporarily before the regulation binds (Forsyth 2004). Bilotkach et al. (2012) find that price monitoring otherwise lowers aeronautical charges in EU airports relative to all other forms of regulation in EU countries.

Toronto (2013).[28] Although many issues are yet to be solved, the City of Toronto should give the appropriate parties the time necessary to address and resolve them before making a final decision on the future of the Island Airport.

The Role of Competition and Competition Policy

When Air Canada was at its most dominant, the *Competition Act* included a section that required the company to provide its competitors "…access on reasonable commercial terms to facilities or services that are essential to the operation in a market of an air service…"[29] This element of the Act provides a useful model for enforcing competition at airports.

The ability of the Competition Bureau to enforce competitive outcomes not only makes an airport-specific regulator unnecessary but potentially harmful if the regulator is able to endorse anti-competitive practices that contravene the *Competition Act* (Duijm 2004). This regulatory supremacy is entrenched in the Regulated Conduct Doctrine, in which legislation that enacts a regulatory regime shields the regulated sectors from the enforcement of the *Competition Act* by the Competition Bureau (Mysicka and Mckendry 2013). The *Competition Act* – potentially supported by Australian-style price monitoring, rather than by explicit regulation – is likely the best tool to ensure against anti-competitive behaviour or mergers by individual airports. In sum, an existing agency with a broad mandate to enforce competition likely would prove better at enforcing low prices for consumers than a regulator narrowly focused on price setting in the airport or aviation sector or a non-profit Airport Authority.

Supporting the Airline-Airport Relationship

To resolve the potential problem that airports would increase prices unilaterally, airports and airlines could enter into long-term contracts.[30] Such contracts would encourage airlines to make sunk investments – such as airline-specific infrastructure – with a reasonable guarantee on their rate of return, even if such contracts cannot foresee every possible scenario that might affect the investment. Airlines and airports also could vertically integrate to fully align the incentives of the airport with those of the airlines. A recent example of this is Porter Airlines, where the terminal operator and the airline are owned by the same company, although the Toronto Port Authority owns the airport itself.[31] Such contracts or vertical integration raise the risk, however, that new entrants could be excluded to protect incumbents. Thus, rather than regulate prices through a sector-specific regulator, the federal government should rely instead on the Competition Bureau, which has a mandate to enforce competitive

28 Although outside the scope of this *Commentary*, the City of Toronto (2013) suggests that some of the remaining issues include: updating the noise measurement standard, creating a local traffic master plan, updating the land use zoning of the airport, and addressing the long-term future of the agreement between the Toronto Port Authority, the City of Toronto and Transport Canada regarding the Island Airport.

29 This was section K, paragraph 78 of the *Competition Act*, repealed in 2009. See http://laws-lois.justice.gc.ca/eng/acts/C-34/section-78-20021231.html.

30 All contracts inevitably are incomplete. Hart and Moore (1988) show that, in the case of the expectation, or hope, of repeated contracts, parties will agree on how to resolve items not explicitly covered in a contract.

31 The Toronto Port Authority held an exclusive arrangement with Porter Airlines that prevented other commercial carriers from offering service to Toronto Island Airport. The Competition Bureau sanctioned this exclusive arrangement for a five-year period, which, when it expired in spring 2010, resulted in the Toronto Port Authority's opening access to the facility to new competitors (Deveau 2010).

outcomes that protect those who cannot negotiate directly with airports, such as customers and future potential entrants.

CONCLUSION

The federal government should initiate a series of comprehensive reforms across the aviation supply chain that would benefit taxpayers, consumers, and the Canadian aviation sector as a whole. It could start with the easiest, less transformative, policy changes and build toward more substantial reforms. Sequencing reforms in such a manner would put existing players on a level playing field domestically before the complete liberalization of the airline sector. Such steps would improve Canada's competitiveness with respect to the subsidized US aviation system, put the Canadian system more in line with those in the United States and the European Union, and give current domestic players a better chance to thrive in, and thus support, a more internationally open aviation sector. Among the steps the federal government could take are the following:

- Eliminate provincial and federal fuel taxes, which would benefit Canadian consumers and make the entire Canadian aviation supply chain more efficient.
- Raise the allowable foreign ownership limit on Canadian airlines to 49 percent, which would reduce capital costs for airlines while preserving Canadian control.
- Eliminate additional burdens on Air Canada and Airport Authorities, such as overly onerous location and language restrictions, as well as measures that specifically aid Air Canada.
- Auction off remaining leases for the smallest National Airport System Airport Authorities and, later, major Airport Authorities.
- Eventually, eliminate all foreign ownership restrictions on Canadian airlines, and allow foreign airlines to operate domestic routes by renegotiating more comprehensive Open Skies agreements with the United States and the European Union.[32]

Policymakers need to recognize that they are not starting from scratch and must account for existing policies, such as the value the federal government places on receiving regular rent payments. Instead of collecting ground rent for the duration of airport leases, the present value of which I estimate to be as much as $42 billion from the eight major airports, the federal government should sell its ownership stake in the airports. Private investors might be willing to pay more than this, however, if their future profits from owning the airports are more than the federal government's rent revenues. Such a transaction could make investors, airlines, customers, taxpayers and the federal government financially better off. Shareholders would be better placed to hold airport operators to cost accountability than the current boards of directors of Airport Authorities.

Eliminating ground leases and putting companies on a for-profit, tax-paying basis could also lower the cost of capital for airports. The conclusion of the Canada Transportation Act Review Panel still stands today: "Privatization would lead to a once-and-for-all determination of appropriate compensation for the government's past investments" (2001, 160). Explicit regulation of

32 If there are additional concerns related to foreign subsidies of airlines, the best venue for action is the World Trade Organization rather than continued protection of the Canadian market. Indeed, foreign government subsidies of airlines will benefit Canadian consumers at the expense of others.

airports is not necessary; instead, a light-handed regulatory model overseen by the Competition Bureau likely would suffice to curb potential market power.

Reforms that increase the number of travellers who can transit through Canada without visas and that reduce visa-processing times would also be useful short-term steps. A longer-term reform agenda to build the most economically efficient aviation system possible would see Ottawa treat airports and airlines like regular businesses, remove sector-specific ownership and operation regulations, and let companies compete on a world stage.

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